REMARKS

This paper is filed in response to the official action dated March 13, 2009 (the official action) and is accompanied by a request for continue examination and requisite extension fee.

All pending claims 1, 4, 7, 10, 13, 14, 17, 23, 27, 28, 30 and 31 have been variously rejected as obvious over U.S. Patent 6,424,326 to Yamazaki ("Yamakazi") in view of U.S. Patent No. 5,594,463 to Sakamoto ("Sakamoto"), Japanese Patent No. JP-2000-132133 ("Tomita") and applicants' assertedly admitted prior art ("AAPA"). Applicant respectfully traverses the rejections.

I. TELEPHONIC INTERVIEW SEPTEMBER 10, 2009

Applicant appreciates the telephonic interview held on September 10, 2009 to discuss independent claim 1 and the Yamazaki and Sakamoto references. The following remarks provide a more detailed summary of that interview. However, generally, applicants' representative noted that the examiner has not pointed to anything in Yamazaki identifying an adjustable constant current generator. The voltage source V is a constant voltage source. And the office action has failed to show that the EL drive transistor 131 is configured to operate as a constant current generator. The examiner responded that while there was no express description that these two elements (V and 131) formed a constant current generator, the elements nevertheless operated as such. Applicant's representative further noted that the recited adjustable constant current generator produced an adjustable constant current that determined the gate voltage on a transistor. Figure 7b illustrates an example. The examiner responded that, although there is no question the current from the transistor 131 is supplied directly to the EL element 132, one could still argue that such current determines the gate voltage on the drive transistor 131. Therefore, no agreement was reached.

No other exhibits, illustrations, other prior art, other prior art rejections, or any other pertinent matters, as set forth in MPEP 713.04, were discussed during the telephonic interview.

Pursuant to MPEP 713.04, applicant respectfully requests the examiner to check the accuracy of this interview summary and respond to the same, if unacceptable. This written reply is being filed within one month of the interview.

II. AMENDMENTS TO CLAIMS

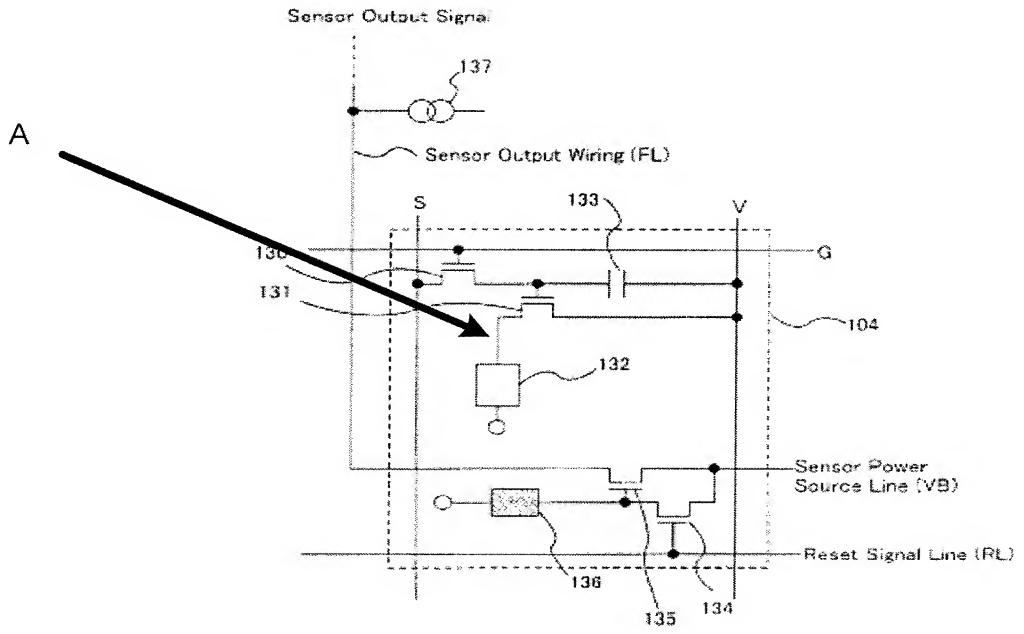
Claim 1 has been amended to clarify the recitation of the adjustable constant current generator. That recitation now recites "a plurality of adjustable constant current generators each for driving a row or column of said display and each configured to produce an adjustable constant current that is coupled to establish said voltage on said gate connection of said pixel driver circuit."

It is respectfully, but strongly asserted that none of the prior art provides any teaching of a display driver having a plurality of adjustable constant current generators as recited. Sakamoto, for example, is a current driven system, that supplies a constant current to drive lines. But that constant current is not supplied to the **gate** of a transistor of a driver circuit. Yamazaki is a voltage driven system, which although misread by the examiner as teaching a constant current generator, either way clearly does not produce a constant current that can establish a voltage on a gate connection of a driver circuit. For these reasons alone, the rejection of claim 1 is traversed and removal respectfully requested.

The examiner has argued that the voltage source, V, combines with the EL drive TFT 131 to form a constant current source. The applicant's response after final, filed June 12, 2009 (and incorporated herein by reference) showed that, in fact, the Yamazaki system was based on a constant voltage generator, V, not a constant current source. See, e.g., Yamazaki 2:24-26 and 3:10-27. The examiner has acknowledged that the current produced by the drive TFT 131 is based on the gate voltage to that transistor, and that gate voltage is controlled, at least in part, by the voltage on the signal line, S. But that is another way of saying that the current from the drive TFT 131 is voltage dependent, while a current source, on the other hand, is a device that produces a current substantially independent of drive voltage. As would be understood by persons of ordinary skill in the art, a constant current source is able to produce a constant current so long as its load is within operational bounds. It is generally not considered a simple voltage to current converter, as would appear to be the result of the office action analysis. **Either way, Yamazaki does not say, nor does the examiner otherwise establish, that the driver TFT 131 produces a constant current to the sensor EL element 132**, which alone establishes that the rejection of claim 1 improper and traversed.

Beyond this distinction however, claim 1 has been clarified to recite that the adjustable constant current generators are "configured to produce an adjustable constant

current that is coupled to establish said voltage on said gate connection of said pixel driver circuit." In the telephonic interview, the examiner identified the current on the source/drain of TFT 131 as the constant current produced by the 'constant current source.' That current, marked at line A below, is supplied directly to the sensor EL element 132.



As is clearly shown, the current is not coupled to a gate connection, nor is it otherwise configured to determine a gate voltage. The current simply supplies the EL element. The voltage on the gate of drive TFT 131 is determined solely by the turn-on of switching TFT 130 in response to gate signal G and further in response to any residual effect on the gate voltage from capacitor 133 and voltage V. The gate voltage turns on the transistor 131 and thus causes current to flow through the transistor, but nowhere is that gate voltage said or described to be determined by the current from that transistor. Comparing Yamazaki with the example of Figure 7b of the instant application further demonstrates this distinction. Any suggestion that the current determines the gate voltage is contrary to basic understandings of transistor operation and design.

Not only does Yamazaki fail to provide the claimed adjustable constant current generators, Sakamoto fails to teach such structures as well. Whereas Yamazaki is a voltage driven circuit, Sakamoto does have a constant current source 82 that drives each of the drive lines A0, A1, etc. The output of that constant current source though does not

control the gate voltage for a transistor of a driver circuit. Each drive line is coupled to the collector of a BJT 96-0, 96-1, etc. The base that controls the switching of these BJTs is controlled by a separate pulse width modulator circuit (PWM) 48-0, 48-1, etc. When the PWM 48-0, for example, sends a turn on signal to the BJT 96-0, current from the constant current generator 82 is supplied to the A0 to turn on the display elements 52. If the PWM does not turn on the BJT, then no current flows. The current does not determine the base/emitter or collector/base voltage. See, Sakamoto 6:56-7:6.

In any event, neither Yamazaki nor Sakamoto can be said to teach or otherwise provide the recited display drive, including "a plurality of adjustable constant current generators each for driving a row or column of said display and each configured to produce an adjustable constant current that is coupled to establish said voltage on said gate connection of said pixel driver circuit." The rejection of claim 1 is thus traversed, as are the rejections of the claims depending therefrom.

Method claim 17, which generally corresponds to apparatus claim 1, is patentable for corresponding reasons. Moreover, claim 17 recites "monitoring control lines of the display to sense said voltages on said gate connections," further distinguishing over the cited art. Sakamoto may detect the voltage drop in one drive line, but the voltage detected is not a gate voltage at all, but rather the difference voltage on a drive line. Furthermore, the gate voltage is set by the PWM and thus would not need to be detected, as it is already known.

The rejection of claim 17 is traversed, as are the rejections of the claims depending therefrom.

III. CONCLUSION

In light of the foregoing, applicant respectfully traverses the rejections of all pending claims, and asserts that this case in condition for immediate allowance.

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Respectfully submitted,

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